

electromagnetic interference suppressing body during use thereof in association with said electronic device.

20. (Amended.) The electronic device of claim [16]19, wherein said electrical components are in the form of an integrated circuit.

### REMARKS

Entry of the foregoing amendments, and reexamination and reconsideration of the subject application, pursuant to and consistent with 37 C.F.R. § 1.104 and § 1.112, and in light of the following remarks, are respectfully requested.

By the present amendments, claim 1 now requires the heat conducting powder to be electrically insulating. Examples of such powders are described at least at page 7 (lines 13-17); ceramics such as alumina and aluminum nitride and beryllia, as described therein, are well known in the electronic package industry as providing heat conductivity and electrical insulating properties. The dependency of claim 20 has been changed. No new matter is presented.

With regard to the previous final rejection and the advisory actions, the basis for the rejection is that the soft magnetic powder and the heat conductive powder can be the same material. While this basis has been well-traversed, the present amendment makes clear that the heat conductive powder is electrically insulating, and so is different from the soft magnetic powder.

Hartman uses a ferromagnetic core particle with an electrically conductive surface. The ferromagnetic cores attract to form bridges of particles that span the tape so that conductive paths along the surface of the bridge are formed through

the tape. These conductive paths of connected particles are the antithesis of an electrically insulating powder *dispersed* through the binder. Because the conductive bridges span opposing sides of the tape, an electromagnetic wave would appear to be transmitted from one side to the other rather than being suppressed.

As for the obviousness rejection based on Hartman in combination with Ogawa or Takahashi, both of the secondary references are directed to magnetic recording media, which typically have a multilayer configuration. But how can Hartman be made multilayer without destroying the electrically conductive bridges? Further, claim 15 requires (i) a first composite magnetic body and (ii) an electrically conducting support. If Hartman is the electrically conducting support, then from where is the composite magnetic body? As discussed below, the recording media of Ogawa and Takahashi are not electromagnetic interference suppressing articles because conducting the wave away would appear to destroy the information recorded on the tape. Still further, recording media must have a material akin to a hard magnetic material to retain the information recorded, which is clearly unlike the soft magnetic material recited in the claims.

Horie discloses the combination of iron (hard magnetic) or an iron alloy (possibly soft magnetic) with an inorganic powder. As described therein, the inorganic powder "fulfills the function of enhancing the effective resistivity value for alternating current magnetization" as well as effectively lubricating the iron particles during molding (sentence bridging columns three and four). Thus, Horie is only concerned with the dielectric properties and not with heat conductivity. Given that both hard and soft magnetic materials are disclosed and there appears

to be no teaching regarding thermal conductivity, the claims are not anticipated. There is no teaching to select only a soft magnetic material to obtain interference suppression plus a highly heat conductive material as recited in the present claims. The present invention thus would not have been obvious since, consistent with *In re Best*, the properties of a composition depend on the particular composition, and a not insignificant number of the Horie compositions will not function as an interference suppressing device. In fact, the intent of Horie is to make magnetic cores<sup>1</sup> rather than a device to shield components from electromagnetic interference. To the extent the rejection is maintained based, at least in part, on "the examiner's opinion," an affidavit (37 C.F.R. § 1.104(d)(2)) is requested to be submitted by the examiner to substantiate the basis for the examiner's opinion.

Regarding the Goto reference, as previously amended, the claims require a stationary article as opposed to this reference's recording medium, in which case the medium is selectively magnetizable and so must act like a hard magnetic material and maintain the magnetization when the field is removed, else nothing

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<sup>1</sup> magnetic core

1. A configuration of magnetic material that is, or is intended to be, placed in a spatial relationship to current carrying conductors and whose magnetic properties are essential to its use. It may be used to concentrate an induced magnetic field, as in transformer, induction coil, or armature, to retain a magnetic polarization for the purpose of storing data, or for its nonlinear properties as in a logic element. It may be made of such material as iron, iron oxide, or ferrite and in such shapes as wires, tapes, toroids, or thin film. 2. A storage device in which binary data is represented by the direction of magnetization in each unit of an array of magnetic material, usually in the shape of toroidal rings, but also forms such as wraps on bobbins. Synonymous with "core."

Definition as found at


[http://www.isa.org/Content/NavigationMenu/Members\\_and\\_Leaders/Dictionary/Definitions/DefineM.htm](http://www.isa.org/Content/NavigationMenu/Members_and_Leaders/Dictionary/Definitions/DefineM.htm) of the Instrumentation, Systems, and Automation Society.

is recorded. Accordingly, this reference does not anticipate or render obvious the claimed invention.

Takahashi likewise is directed to a magnetic recording medium, and so fails in being movable and in being permanently (and reversibly) magnetizable, the opposite of a soft magnetic material wherein the domains are free once the magnetic field is removed. The statement in the rejection that Takahashi would inherently suppress electromagnetic interference does not provide any scientific basis for such an allegation. In fact, to the extent an electromagnetic wave were suppressed along the recording medium, it would appear to at least partially destroy the information recorded on the adjacent medium.

In light of the foregoing amendments and remarks, withdrawal of the rejection, and further and favorable action, in the form of a notice of allowance, is believed to be next in order, and such actions are earnestly solicited.

Respectfully submitted,



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## APPENDIX SHOWING MARK-UPS OF AMENDMENTS

10. (Fourth amendment.) An electronic device comprising:

a stationary electromagnetic interference suppressing body for suppressing electromagnetic interference due to external and/or internal presence of electromagnetic waves, said stationary electromagnetic interference suppressing body comprising an organic binding agent layer and a soft magnetic powder dispersed through said organic binding agent layer, and further comprising a heat conductive but electrically insulating powder dispersed through said organic binding agent layer, for improving the thermal conductivity of said electromagnetic interference suppressing body during use thereof in association with said electronic device.

20. (Amended.) The electronic device of claim [16]19, wherein said electrical components are in the form of an integrated circuit.